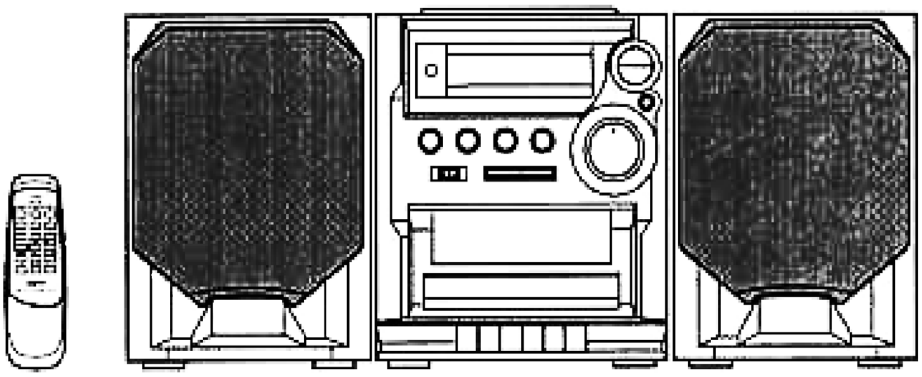
SANYO

FILE NO.

Service Manual

CD Portable Radio Cassette Recorder

MCD-S935F (AU) (XE)



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Wiring Diagram (DISPLAY) ..... Rear

PRODUCT CODE No.
164 126 01 XE
164 126 02 AU

REFERENCE No. SM5810655

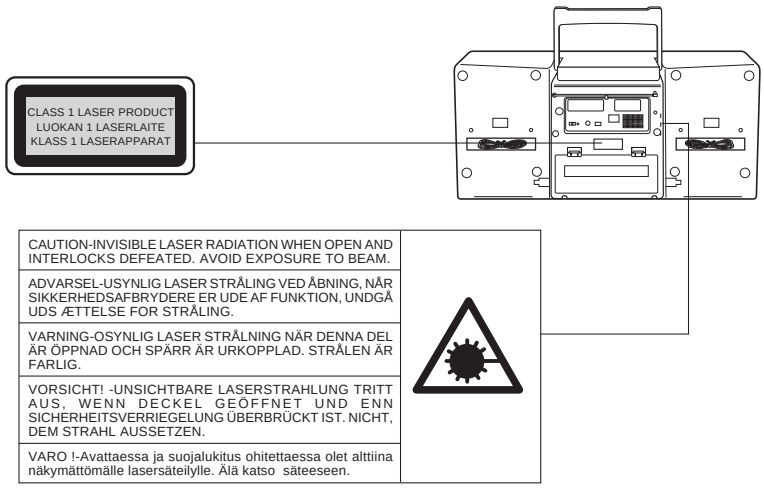
LASER BEAM SAFETY PRECAUTION

- Pick-up that emits a laser beam is used in this CD player section.

CAUTION :

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE

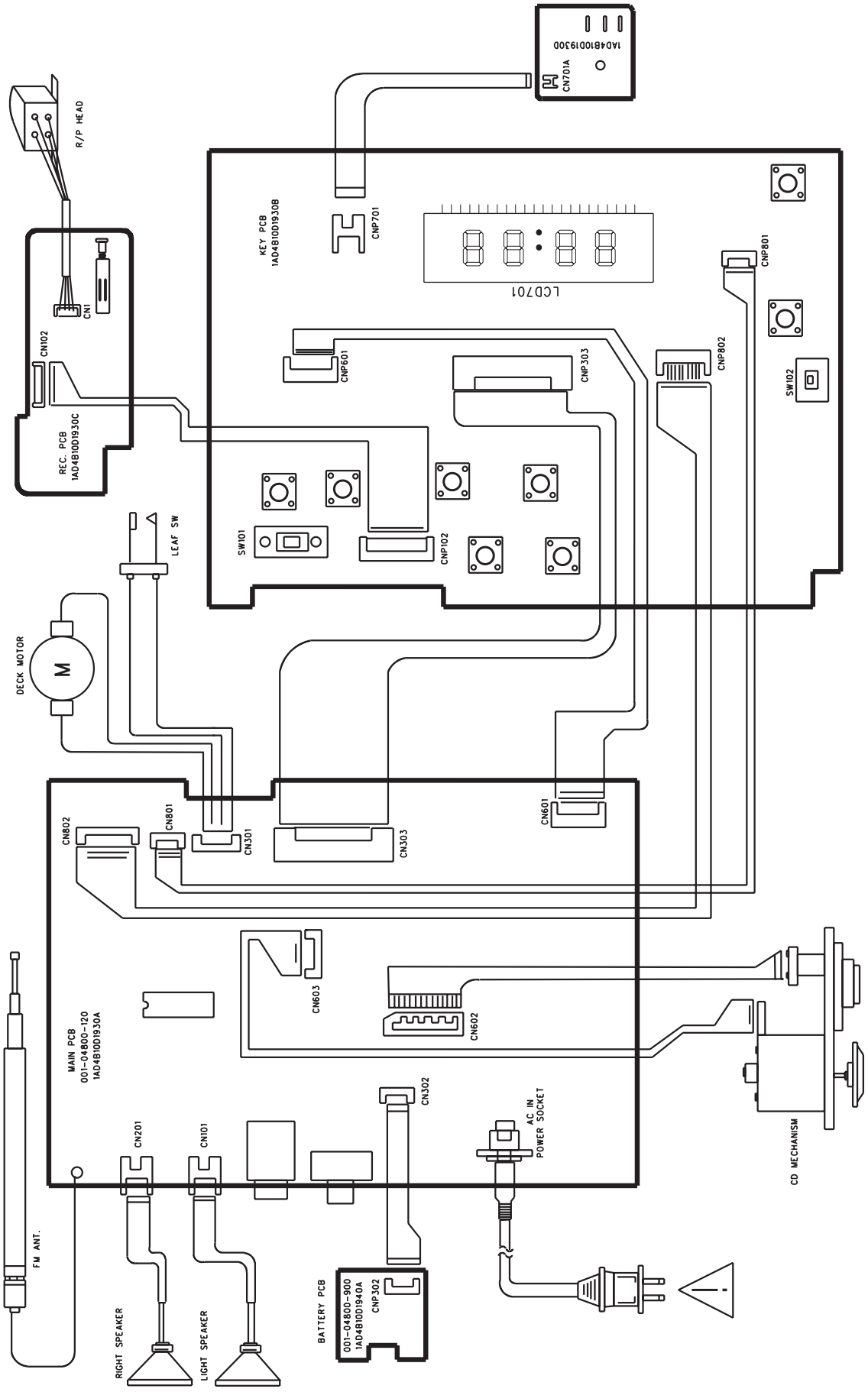
LASER OUTPUT ..... 0.6 mW Max. (CW)
WAVELENGTH ..... 790 nm



CAUTION-INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL-USYNLIG LASER STRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION, UNDGÅ UDS ÆTTELSE FOR STRÅLING.
VARNING-OSYNLIG LASER STRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRR ÄR URKOPPLAD. STRÅLEN ÄR FARLIG.
VORSICHT! -UNSICHTBARE LASERSTRAHLUNG TRITT AUS, WENN DECKEL GEÖFFNET UND ENN SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT IST. NICHT, DEM STRAHL AUSSETZEN.
VARO !-Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.

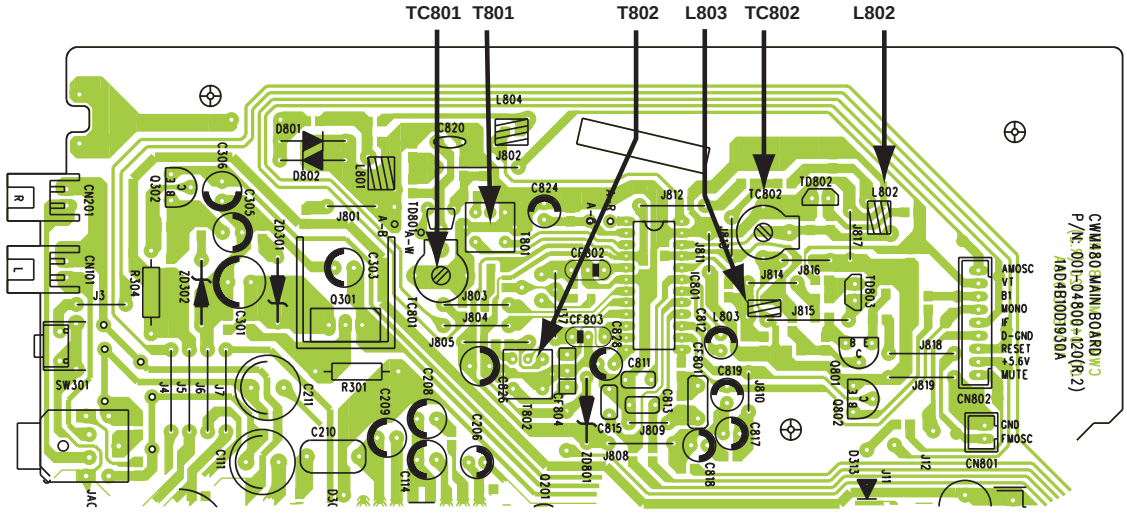
WIRING CONNECTION

This is a basic wiring connection .



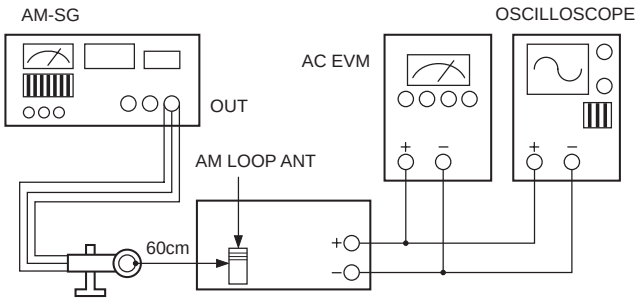
TUNER ADJUSTMENTS

Part Location



(1). AM TRACKING ADJUSTMENT

Signal Generator ..... Connects to the AM ANT. Coil througt the loop antenna.
Adjust for the indication of VTVM of the wave form scope to be maximum.



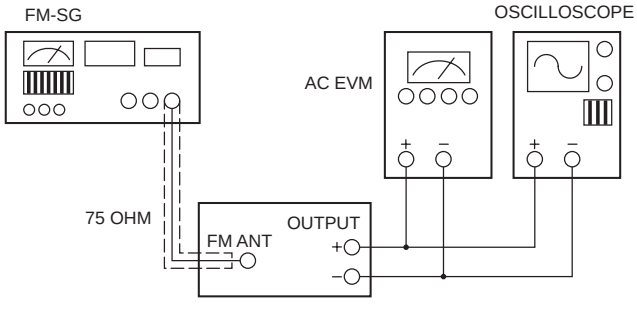
(FIG.4)

(USA)

BAND	STEP	SING. FRE.	ADJUST FOR	ADJUSTMENT
AM	1	600KHz	MAXIMUM SENSITIVITY	L805 (ANT COIL)
	2	1400KHz	MAXIMUM SENSITIVITY	TC801
	3	REPEAT STEP 4 AND 5 SEVERAL TIMES		

(2). FM RF TRACKING ADJUSTMENT

Signal Generator ..... Connects to the FM ANT JACK (FM IN) through the dummy.

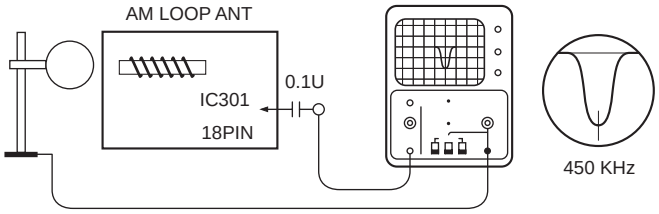


(FIG.5)

BAND	STEP	SING. FRE.	ADJUST FOR	ADJUSTMENT
FM	1	90MHz	MAXIMUM SENSITIVITY	L802
	2	106MHz	MAXIMUM SENSITIVITY	TC802
	3	REPEAT STEP 1 AND 2 SEVERAL TIMES		

TUNER ADJUSTMENTS

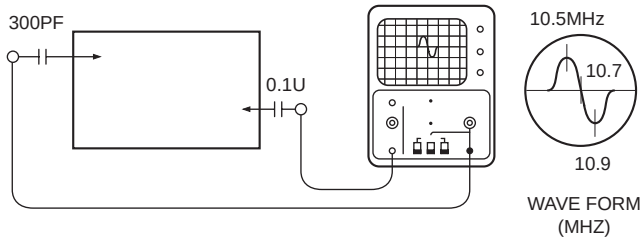
(3). AM IF ADJUSTMENT



(FIG.1)

BAND	STEP	SING. FRE.	RADIO SETTING	ADJUST-MENT	REMARKS
MW-IF	1	450KHz		T802	ADJUST FOR BEST IF WAVE FORM

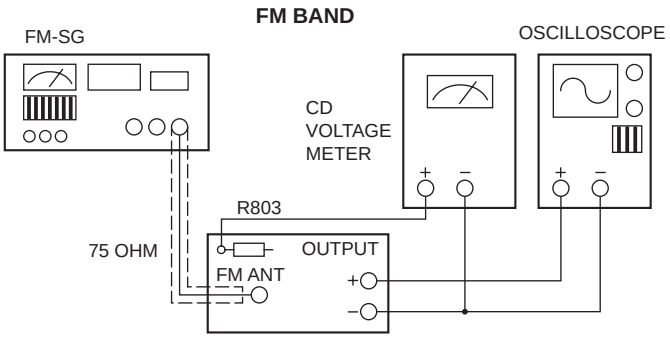
(4). FM IF ADJUSTMENT



(FIG.2)

BAND	STEP	SING. FRE.	RADIO SETTING	ADJUST-MENT	REMARKS
FM-IF	1	10.7MHz		- - - -	- - - -

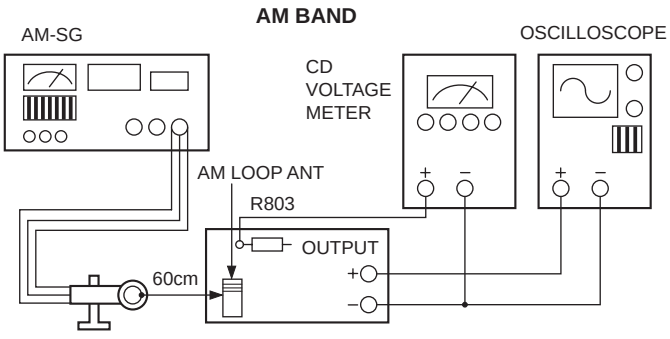
(5). TUNING FREQUENCY RANGE ADJUSTMENT



(USA)

FM Band: Set the internal modulation of Singnal generator to 1 KHz Dev. 22.5KHz

NO.	BAND	SING. FRE.	ADJUST FOR	ADJUSTMENT
1	FM	87.5MHz	CHECK 1.4V~1.5V	L803
2	FM	107.9MHz	CHECK 5.0V~5.5V	- - - -
3	REPEAT STEP 1 AND 2 SEVERAL TIMES			

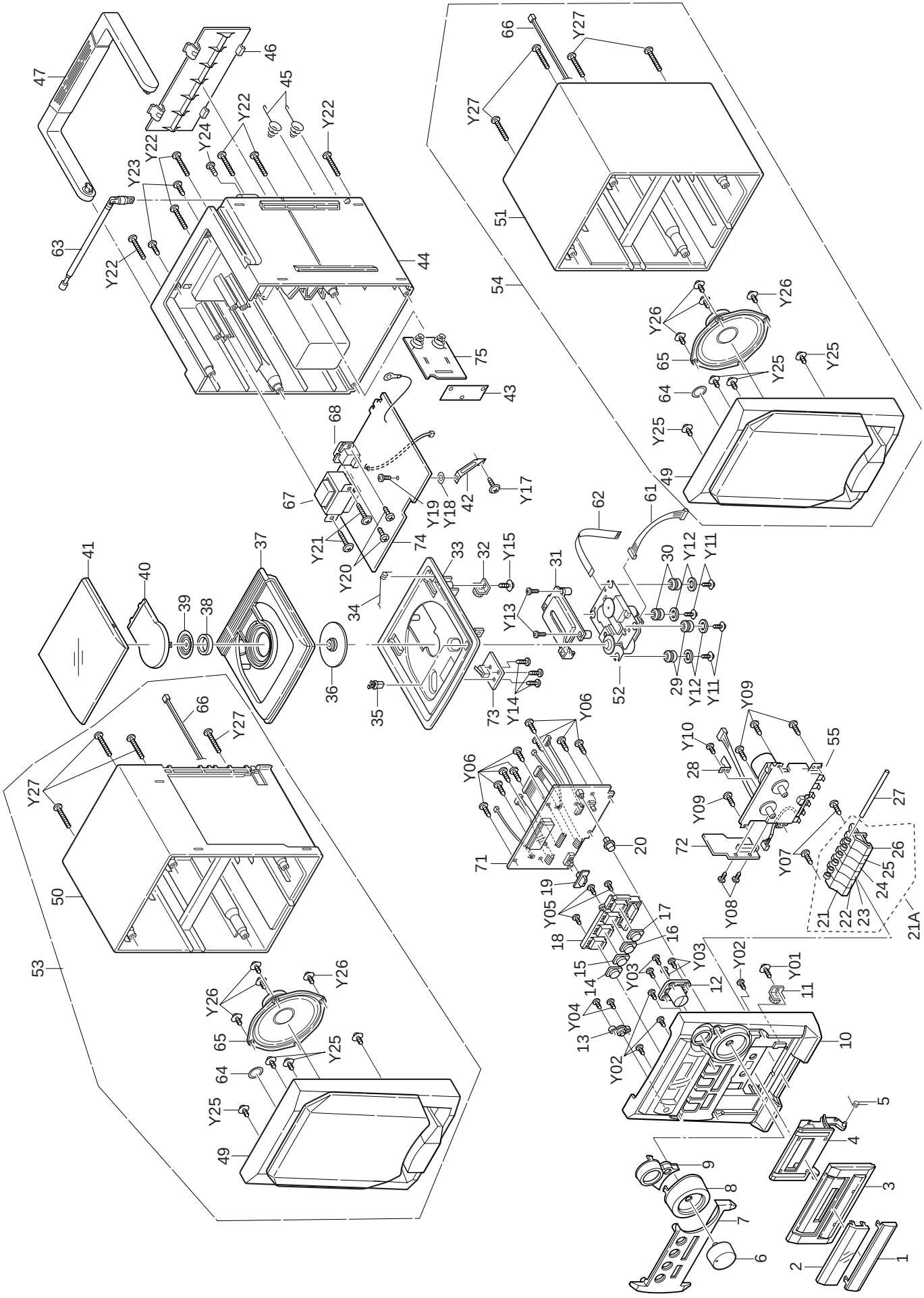


AM Band: Set the internal modulation of Singnal generator to 30% 1KHz

NO.	BAND	SING. FRE.	ADJUST FOR	ADJUSTMENT
4	AM	520KHz	CHCK 1.5V~1.6V	T801
5	AM	1710KHz	CHECK 8V~8.5V	- - - -
6	REPEAT STEP 4 AND 5 SEVERAL TIMES			

(FIG.3)

EXPLODED VIEW(CABINET & CHASSIS)



PARTS LIST

PRODUCT SAFETY NOTICE

EACH PRECAUTION IN THIS MANUAL SHOULD BE FOLLOWED DURING SERVICING. COMPONENTS IDENTIFIED WITH THE IEC SYMBOL ⚠ IN THE PARTS LIST AND THE SCHEMATIC DIAGRAM DESIGNATE COMPONENTS IN WHICH SAFETY CAN OF SPECIAL SIGNIFICANCE. WHEN REPLACING A COMPONENT IDENTIFIED , USE ONLY THE REPLACEMENT PARTS DESIGNATED, OR PARTS WITH THE SAME RATINGS OF RESISTANCE, WATTAGE OR VOLTAGE THAT ARE DESIGNATED IN THE PARTS LIST IN THIS MANUAL. LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS MUST BE MADE TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE PRODUCT TO THE CUSTOMER.

CAUTION : Regular type resistors and capacitors are not listed. To know those values, refer to the schematic diagram.
Regular type resistors are less than 1/4W carbon type and 0 ohm chip resistors.
Regular type capacitors are less than 50V and less than 1000µF of Ceramic type and Electrolytic type.

PACKING & ACCESSORIES

REF.NO.	PART NO.	DESCRIPTION
	645 069 4929	INSTRUCTION MANUAL(XE)
	645 069 4912	INSTRUCTION MANUAL(AU)
	645 020 3626	POLBAG,FOR AC CORD
	645 060 2948	POLYFOAM BOTTOM
	645 060 2931	POLYFOAM TOP
	645 073 6346	POP CARD
	645 047 8703	REMOTE CONTROL, REMOTE CTL HANDSET
⚠	645 073 6261	AC CORD SET,SAA(AU)
⚠	645 037 8454	AC LINE CORD,VDE(XE)
	645 073 6315	CARTON BOX(AU)
	645 073 6322	CARTON BOX(XE)

CABINET & CHASSIS

REF.NO.	PART NO.	DESCRIPTION
1	645 060 2917	CASS DOOR COVER
2	645 060 2665	CASS DOOR LENS
3	645 060 2641	LID CASS
4	645 060 2900	CASS DOOR BKT
5	645 049 6240	CASS DOOR SPRING
6	645 060 2726	VOLUME KNOB,ROTARY
7	645 060 2634	FRONT PANEL
8	645 060 2870	VOLUME KNOB RING, VOLUME KNOB BKT
9	645 060 2887	TUNING KNOB RING, TUNING KNOB BKT
10	645 073 6186	ASSY CABINET FRONT
11	645 026 6454	ASSY,CASS GEAR
12	645 060 2788	TUNING BUTTON,UP/DOWN
13	645 060 2689	REMOTE SENSOR LENS
14	645 060 2757	PRESET BUTTON
15	645 060 2764	BAND BUTTON
16	645 060 2740	STOP/CLEAR BUTTON
17	645 060 2771	PLAY/PAUSE BUTTON
18	645 060 2801	CTL BUTTON SET, REPEAT/FM MODE/MEMORY
19	645 060 2733	SLIDE KNOB, FUNTION CD/TAPE/RADIO
20	645 060 2795	BASS BUTTON
21A	645 069 2956	ASSY CASS BUTTON
21	645 060 2818	CASS BUTTON REC
22	645 060 2825	CASS BUTTON PLAY
23	645 060 2832	CASS BUTTON REW
24	645 060 2849	CASS BUTTON FFWD
25	645 060 2856	CASS BUTTON STOP/EJE
26	645 060 2863	CASS BUTTON PAUSE
27	645 049 6257	CASS BUTTON SHAFT
28	645 026 5686	RECORDING BRACKET, CASS MECHA
29	645 049 6486	HARD RUBBER,NO:RY-105112 DA11
30	645 049 6479	SOFT RUBBER,NO:RY-105118 DA11
31	645 025 2556	CD BRACKET 9503
32	645 025 1542	ASSY,GEAR CD DOOR
33	645 054 0066	CD BRACKET, NEVER TOUCH THE LENS
34	645 049 6493	CD DOOR SPRING,S925
35	645 069 3038	SW CD LOCKER
36	645 069 3120	MAGNET CHUCK PLATE
37	645 060 2658	LID CD
38	645 025 2549	MAGNET NMB FERRITE CORES
39	645 060 3044	CD MAGNET COVER TOP
40	645 060 2894	CD TUN PLATE,TUN COVER
41	645 060 2672	CD DOOR LENS
42	645 049 6264	BKT PCB MOUNTING,MAIN PCB
43	645 049 6042	BATT COVER PLATE,REAR CAB
44	645 053 9565	ASSY CABINET REAR
45	645 060 2580	BATTERY SPRING (-),S925
46	645 053 9862	LID BATTERY
47	645 053 9893	HANDLE
49	645 060 2429	ASSY BOX FRONT
50	645 060 2436	ASSY BOX REAR L
51	645 060 2443	ASSY BOX REAR R
52	645 069 3113	CD MECHANISM DA11V
53	645 060 2467	ASSY SPEAKER BOX L
54	645 060 2474	ASSY SPEAKER BOX R
55	645 069 3045	CASS MECHANISM, WS-21F DT821 (H) 12V

FIXING PARTS

REF.NO.	PART NO.	DESCRIPTION
Y01	645 025 2365	SCREW 3X8,CASS EJECT GEAR
Y02	645 016 5078	SCREW,CASS LID
Y03	645 025 2365	SCREW 3X8
Y04	645 025 2365	SCREW 3X8
Y05	645 025 2365	SCREW 3X8
Y06	645 014 1911	SCREW,CD KEY BD TO F PANEL
Y07	645 036 2644	SCR 3X8,CASS KEY SHAFT
Y08	645 026 6164	SCREW 2X4,REC BKT
Y09	645 016 5078	SCREW,CASS MECHA
Y10	645 016 5078	SCREW
Y11	645 036 2606	SCR 2.6X8,CD MECHA
Y12	645 025 2433	FIBER WASHER,FOR CD MECHA
Y13	645 025 2402	SCREW 2X8,CD MECHA BKT
Y14	645 016 5078	SCREW,CD SW BD
Y15	645 049 6288	SCR 3 X 8,EJECT GEAR HOLDER
Y17	645 049 6271	SCR 2.6 X 10
Y18	645 017 1895	FIBRE,WASHER,FOR BKT
Y19	645 049 6271	SCR 2.6 X 10,MAIN PCB
Y20	645 018 3690	SCREW,FOR AC SKT
Y21	645 025 2426	SCREW 3X12,PWR TRANS
Y22	645 049 6295	SCR 3 X 25,F CAB TO R CAB
Y23	645 018 3690	SCREW,CD HEAD REAR CAB
Y24	645 036 2644	SCR 3X8,FM ANT
Y25	645 018 0521	SCREW,SPK NET
Y26	645 025 2372	SCREW 3X8,SPK BOX
Y27	645 026 6218	SCREW 3X20,SPK BOX

PARTS LIST

ELECTRICAL-PARTS

REF.NO.	PART NO.	DESCRIPTION
61	645 027 0000	6P J.WIRE AWG28UL, CN603 TO CD MECHA
62	645 060 2566	16P FILM CABLE, CN602 TO CD MECHA
63	645 049 5847	ROD ANTENNA
64	645 049 5786	BUZZER
65	645 049 5779	5" SPK,W/BLACK CAP
66	645 049 5694	2P J WIRE AWG22UL,SPK TO MAIN
67	645 038 2321	PWR TRANS
or	645 073 6254	POWER TRANSFORMER
68	645 022 1590	AC SOCKET
	645 016 1919	2P J.WIRE AWG26UL, CTL CNP701 TO SW CN701
	645 060 2528	2P J WIRE AWG26UL, MAIN CN302 TO BATT CNP30
	645 060 2535	2P S SHIELD WIRE AWG, CTL CNP801 TO MAIN CN801
	645 026 9332	4P J.WIRE AWG26UL, MAIN CN301 TO TAPE MOTOR
	645 041 6453	4P 3 CORE SHIELD W, TAPE HEAD TO CN1
	645 069 2994	8P F WIRE UL,CNP601 TO CN601
	645 049 5724	8P F WIRE UL,CNP102 TO CN102
	645 049 5731	15P F WIRE UL,CNP303 TO CN303
	645 049 5755	10P TML, 9 JIS D SH, CNP802 TO CN802

DISPLAY P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
71	614 332 6137	ASSY,PWB,DISPLAY,CTL KEY (Only initial)
C0101	403 060 6904	POLYESTER 3300P M 50V
C0201	403 060 6904	POLYESTER 3300P M 50V
C0714	403 135 4507	ELECT 1000U M 10V
CN701	645 014 1218	2P WAFFR H-TYPE
D0702	645 060 2511	DIODE 1SS133
D0703	645 060 2511	DIODE 1SS133
D0704	645 060 2511	DIODE 1SS133
D0705	645 016 8956	SW DIODE 1N4148
D0706	645 016 8956	SW DIODE 1N4148
D0707	645 016 8956	SW DIODE 1N4148
D0708	645 016 8956	SW DIODE 1N4148
D0709	645 016 8956	SW DIODE 1N4148
D0710	645 016 8956	SW DIODE 1N4148
D0711	645 016 8956	SW DIODE 1N4148
D0712	645 016 8956	SW DIODE 1N4148
D0713	645 016 9250	RECTIFIER
D0714	645 016 8956	SW DIODE 1N4148
D0715	645 016 8956	SW DIODE 1N4148
D0716	645 016 8956	SW DIODE 1N4148
D0717	645 016 8956	SW DIODE 1N4148
D0721	645 016 8956	SW DIODE 1N4148
IC702	645 060 2504	IC LC72336 9B62
L0701	645 021 5438	AXIAL INDUCTOR 10UH
LD701	645 049 5854	LCD DISPLAY
Q0701	645 016 9205	TRANSISTOR
Q0702	645 016 9205	TRANSISTOR
Q0703	645 016 9205	TRANSISTOR
Q0704	645 016 9205	TRANSISTOR
Q0705	645 041 4459	TR 2SA1522
Q0706	645 026 8540	TRANSISTOR,2SC3916
Q0707	645 026 8540	TRANSISTOR,2SC3916
Q0708	645 026 8540	TRANSISTOR,2SC3916
Q0709	645 026 8540	TRANSISTOR,2SC3916
Q0710	645 016 9205	TRANSISTOR
RX701	645 060 2597	REMOTE RECEIVER, INFRARED DETECTOR
S0701	645 041 4596	TACT SW KTL-TC-0103,PRESET
or	645 069 2970	SWITCH TACT,PRESET
S0702	645 041 4596	TACT SW KTL-TC-0103,BAND
or	645 069 2970	SWITCH TACT,BAND
S0703	645 041 4596	TACT SW KTL-TC-0103,REW
or	645 069 2970	SWITCH TACT,REW
S0704	645 041 4596	TACT SW KTL-TC-0103,STOP
or	645 069 2970	SWITCH TACT,STOP
S0705	645 041 4596	TACT SW KTL-TC-0103,PLAY
or	645 069 2970	SWITCH TACT,PLAY
S0706	645 041 4596	TACT SW KTL-TC-0103,FWD
or	645 069 2970	SWITCH TACT,FWD
S0707	645 041 4596	TACT SW KTL-TC-0103,MEMORY
or	645 069 2970	SWITCH TACT,MEMORY
S0708	645 041 4596	TACT SW KTL-TC-0103,REPEAT
or	645 069 2970	SWITCH TACT,REPEAT
SW101	645 049 5670	SW SLIDE,SS43D01M10
SW102	645 036 2002	SWITCH PUSH,PS-22E08L-0
VR101	645 036 3122	ROTARY VR
XT701	645 049 5861	CRYSTAL 4.5MHZ

CASS P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
72	614 332 6144	ASSY,PWB,CASS(Only initial)
C0001	403 061 9003	POLYESTER 4700P M 50V
C0002	403 059 4409	POLYESTER 2200P M 50V
C0003	403 059 4409	POLYESTER 2200P M 50V
C0004	403 061 9003	POLYESTER 4700P M 50V
C0005	403 063 0800	POLYESTER 6800P M 50V
C0006	403 063 0800	POLYESTER 6800P M 50V
C0007	403 061 9003	POLYESTER 4700P M 50V
C0008	403 061 9003	POLYESTER 4700P M 50V
C0014	403 058 1904	POLYESTER 1500P M 50V
C0016	403 058 1904	POLYESTER 1500P M 50V
C0018	403 060 1305	POLYESTER 2700P M 50V
C0020	403 061 9003	POLYESTER 4700P M 50V
C0026	403 057 1202	POLYESTER 0.01U M 50V
CN001	645 017 2045	4P WAFER
CN102	645 026 8823	8P WAFTR
IC001	645 041 6408	IC TA7668BP
Q0002	645 025 1665	TR 2SC3330U
Q0003	645 025 1641	TR 2SA1346-AC
Q0004	645 016 9205	TRANSISTOR
SW001	645 049 5687	SW PUSH,0820250/PS 825
T0001	645 014 1058	BIAS/OSC,AHK809461

CD SW P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
73	614 332 6113	ASSY,PWB,CD SW,CD DOOR SW (Only initial)
SW701	645 025 1818	MICRO SW LF-101-0,LF-101-0

CD MAIN P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
74	614 332 6120	ASSY,PWB,CD MAIN(Only initial)
C0110	403 057 3800	POLYESTER 0.1U M 50V
C0111	403 125 5507	ELECT 1000U M 16V
C0210	403 057 3800	POLYESTER 0.1U M 50V
C0211	403 125 5507	ELECT 1000U M 16V
C0312	403 135 5702	ELECT 4700U M 25V
C0602	403 059 8902	POLYESTER 0.22U M 50V
C0603	403 060 8908	POLYESTER 0.033U M 50V
C0606	403 060 6904	POLYESTER 3300P M 50V
C0607	403 062 1105	POLYESTER 0.047U M 50V
C0608	403 058 6008	POLYESTER 0.15U M 50V
C0613	403 056 8905	POLYESTER 1000P M 50V
C0614	403 057 3800	POLYESTER 0.1U M 50V
C0615	403 058 4004	POLYESTER 0.015U M 50V
C0616	403 059 0708	POLYESTER 0.018U M 50V
C0617	403 060 6904	POLYESTER 3300P M 50V
C0622	403 060 6904	POLYESTER 3300P M 50V
C0633	403 057 1202	POLYESTER 0.01U M 50V
C0638	403 060 8908	POLYESTER 0.033U M 50V
C0640	403 059 4409	POLYESTER 2200P M 50V
C0645	403 057 3800	POLYESTER 0.1U M 50V
C0646	403 057 3800	POLYESTER 0.1U M 50V
C0651	403 135 4507	ELECT 1000U M 10V
C0811	403 058 1904	POLYESTER 1500P M 50V
C0813	403 057 1202	POLYESTER 0.01U M 50V
C0815	403 057 1202	POLYESTER 0.01U M 50V
C0842	403 060 8908	POLYESTER 0.033U M 50V

PARTS LIST

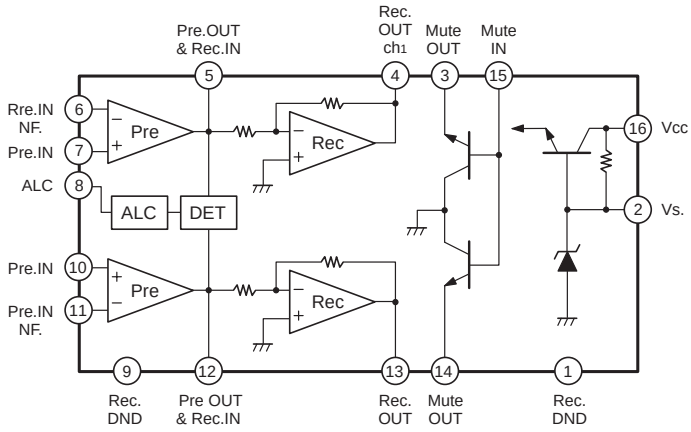
REF.NO.	PART NO.	DESCRIPTION
C0844	403 060 8908	POLYESTER 0.033U M 50V
CF801	645 020 2988	CERAMIC DISCRIMINATOR
CF802	645 049 5762	CERAMIC FILTER
CF803	645 049 5762	CERAMIC FILTER
CF804	645 027 7672	CERAMIC FILTER
CN101	645 026 8816	2P WAFFR
CN201	645 026 8816	2P WAFFR
CN301	645 025 1917	4P WAFER
CN303	645 049 5748	15P WAFER
CN601	645 026 8823	8P WAFTR
CN602	645 060 2542	16P STRAIGHT CONNECT,FFC
CN603	645 017 2052	6P WAFER
CN801	645 016 9342	2P WAFER
CN802	645 014 1232	9P WAFTR V-TYPE
D0301	645 016 9250	RECTIFIER
D0306	645 016 9250	RECTIFIER
D0307	645 016 9250	RECTIFIER
D0308	645 016 9250	RECTIFIER
D0309	645 016 9250	RECTIFIER
D0313	645 016 8956	SW DIODE 1N4148
D0601	645 060 2511	DIODE 1SS133
D0801	645 016 8956	SW DIODE 1N4148
D0802	645 016 8956	SW DIODE 1N4148
FU001	645 014 1447	1.6A APP FUSEDIA5X20 250V,FU1
FU002	645 026 7925	PROTECTOR,LITTEL FUSE
IC101	645 060 2481	IC UTC TA8227P
IC601	645 060 2498	IC LA9242M
IC602	645 025 1610	IC LC78622E
IC603	645 025 1580	IC LA6541D
IC801	645 049 5649	IC LA1823
JACK1	645 036 4372	ST.PHONE JACK,EJS-7-1535B
L0601	645 026 7857	AXIAL INDUCTOR
L0602	645 026 7857	AXIAL INDUCTOR
L0604	645 026 7857	AXIAL INDUCTOR
L0801	645 020 9338	FM COIL
L0802	645 041 4589	FM COILS
L0803	645 014 1072	FM COIL
L0804	645 020 9338	FM COIL
Q0101	645 025 1658	TR 2SD1936-U-AC
Q0201	645 025 1658	TR 2SD1936-U-AC
Q0301	645 036 1937	TR 2SD882
Q0302	645 027 3162	TR 2SD400-F-MPC
Q0600	645 069 2963	TR 2SA608NF NPA WA
Q0601	645 025 1627	TR 2SB764E
Q0801	645 041 4473	TR 2SC2999D
Q0802	645 016 9205	TRANSISTOR
R0304	401 006 9903	CARBON 100 JA 1/2W
SC01	645 025 2396	SCREW 3X8,FOR Q301
SW301	645 027 7634	SWITCH,TACT,IH-1236A
SW901	645 016 1896	SWITCH,SK23D04 G9
T0801	645 027 7603	OSC COIL,AM OSC
T0802	645 049 5663	AM IFT,OH-827538-00
TC801	645 032 4451	TRIMMER 20PF,PHILIPS
TC802	645 016 6495	TRIMMER,PHILIPS
TD801	645 043 7564	TUNING DIODE SVC348
TD802	645 027 7573	TUNING DIODE SVC 201SPA
TD803	645 027 7573	TUNING DIODE SVC 201SPA
XT601	645 036 3573	CERAMIC RESONATOR
ZD301	645 025 1696	ZENER
ZD302	645 027 7566	ZENER DIODE 5.6V
ZD801	645 036 2804	ZENER 4.7V
	645 041 6422	BEAD COIL 25UH,FM ANT
	645 014 2246	FUSE HOLDER,FOR FU1
	645 020 3503	TEST PINS,ANT
	645 026 5716	NUT M3,FOR Q301
	645 036 2668	HEAT SINK,FOR IC101
	645 036 2675	HEAT SINK B,FOR Q301
	645 060 2573	SOLID WIRE
	645 060 2559	FERRITE CORE,CN801 WIRE
	645 069 2949	ASSY BAR ANT

BATTERY P.W.BOARD ASSY

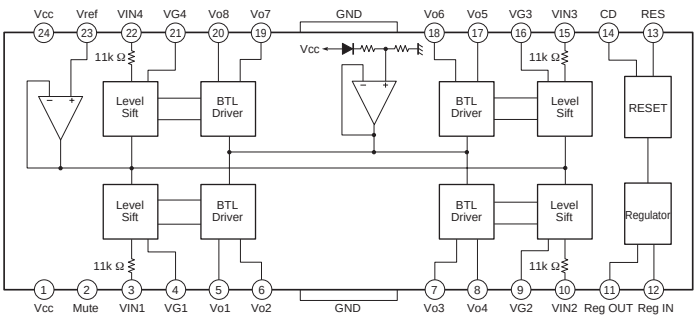
REF.NO.	PART NO.	DESCRIPTION
75	614 331 2451	ASSY,PWB,BATTERY(Only initial)
CNP302	645 026 8816	2P WAFFR
J099A	645 060 2573	SOLID WIRE
J099B	645 060 2573	SOLID WIRE
J099C	645 060 2573	SOLID WIRE
J099D	645 060 2573	SOLID WIRE
	645 060 2580	BATTERY SPRING (-),S925

IC BLOCK DIAGRAM & DESCRIPTION

IC001 TA7668BP (PRE AMP W/2ch ALC)

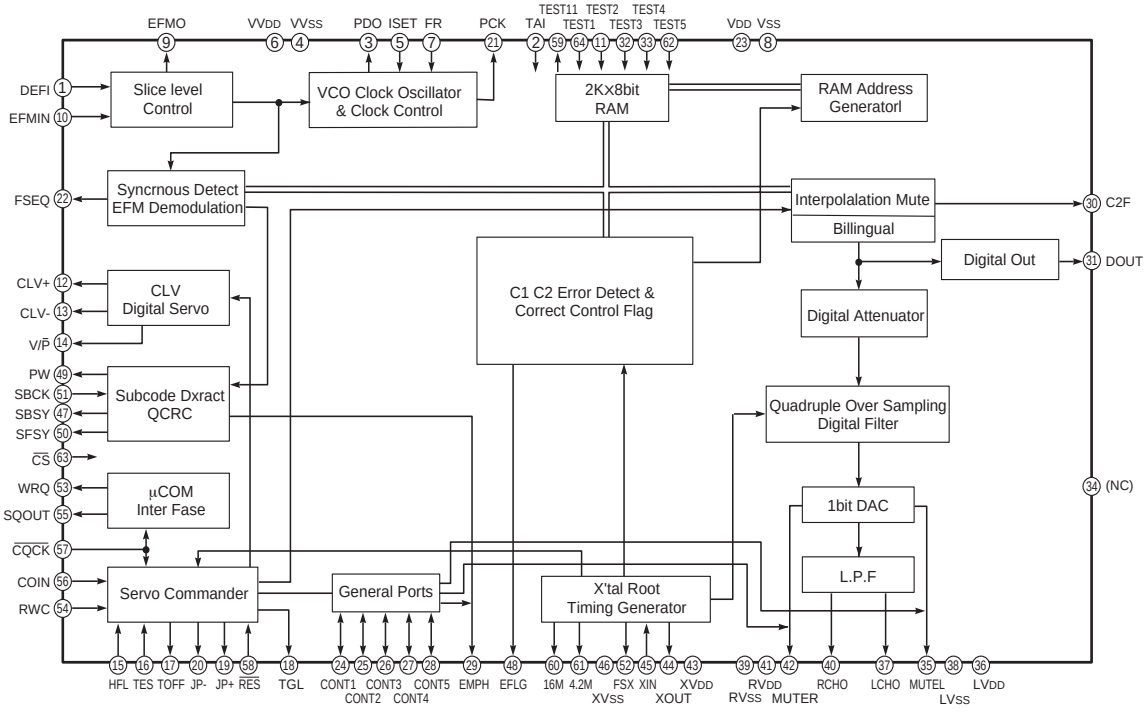


IC603 LA6541 (CD Driver)

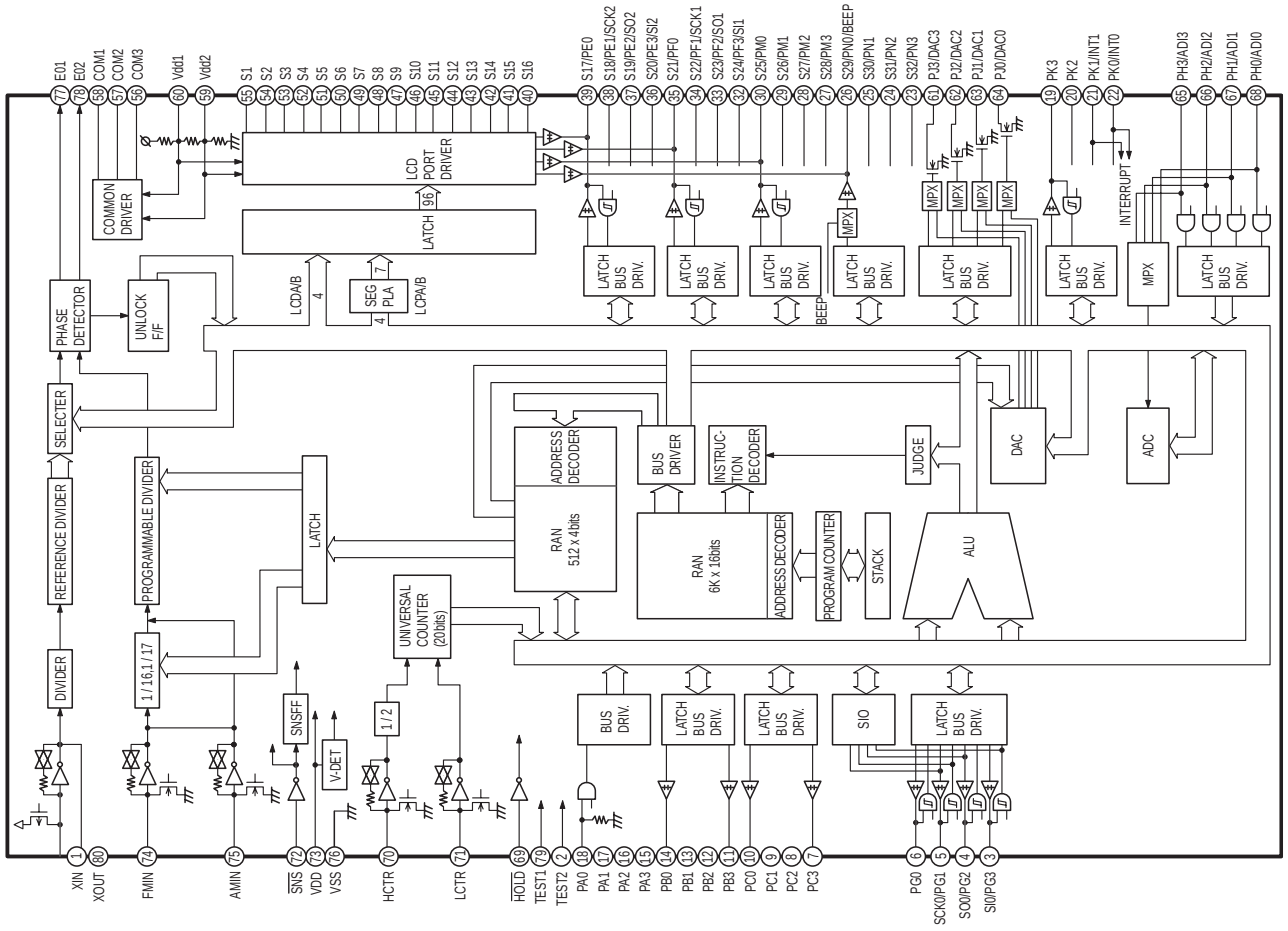


IC BLOCK DIAGRAM & DESCRIPTION

IC602 LC78622 (Digital Signal Processor)

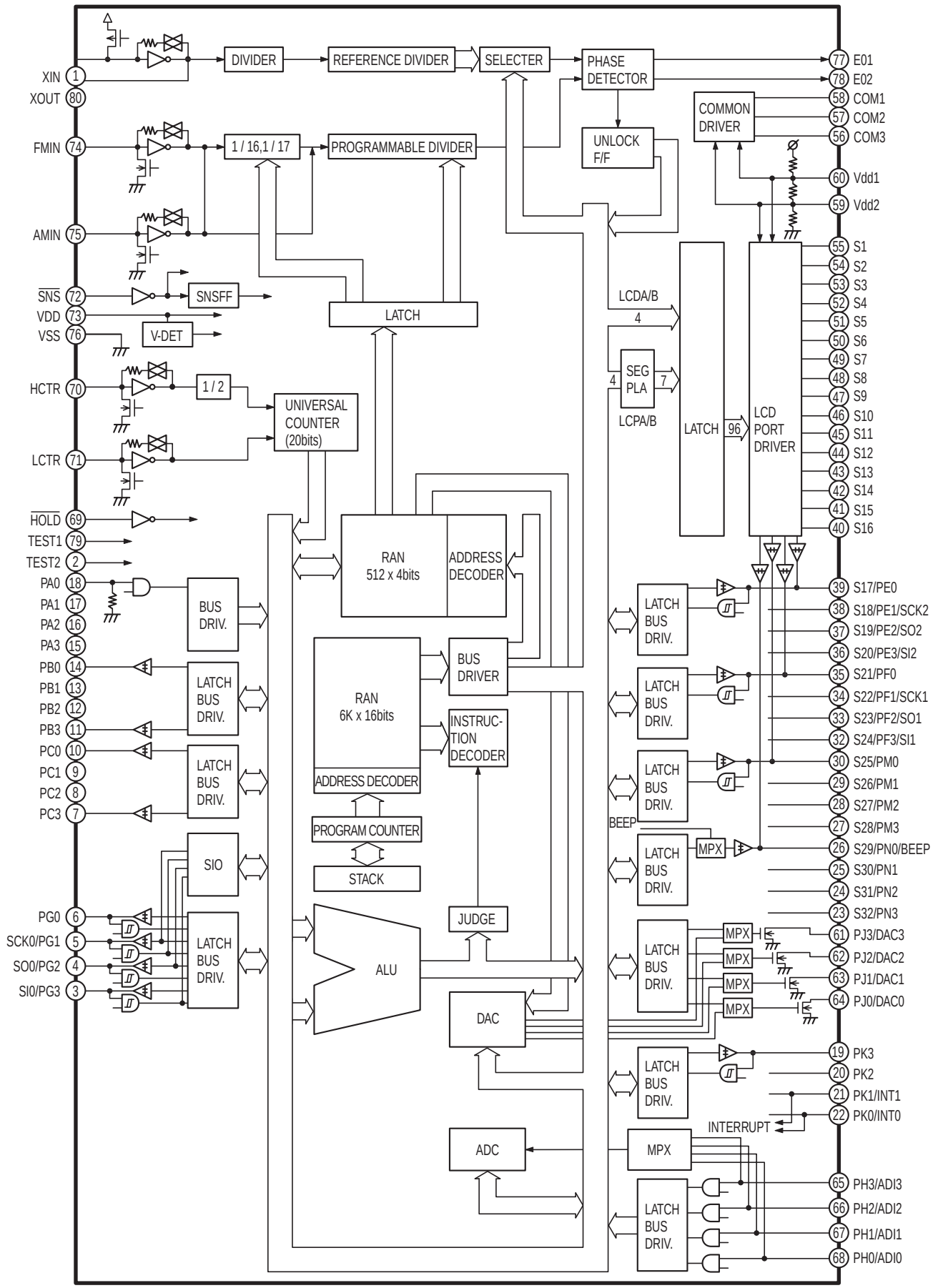


IC070 LC723369557 (LCD Driver)



IC BLOCK DIAGRAM & DESCRIPTION

IC070 LC723369557 (LCD Driver)



IC BLOCK DIAGRAM & DESCRIPTION

IC602 LC78622 (Digital Signal Processor)

Terminal No.	Terminal symbols	I/O	DESCRIPTION	
1	DEFI	I	Input terminal for defect detection signals (DEF). (Ground when not used.)	
2	TAI	I	For PLL	Input terminal for test. Pull-down resistor incorporated. Make sure to ground.
3	PDO	O		Output terminal for phase-comparator for external VCO control.
4	VVSS	-		Ground terminal for internal VCO. Make sure to ground.
5	ISET	AI		Resistive connection terminal for current regulation of PDO output.
6	VVDD	-		Power terminal for internal VCO.
7	FR	AI		For VCO frequency range control.
8	VSS	-	Ground terminal for digital signals. Make sure to ground.	
9	EFMO	O	For slice level control	Output terminal for EFM signals.
10	EFMIN	I		Input terminal for EFM signals.
11	TEST2	I	Input terminal for test. Pull-down resistor incorporated. Make sure to ground.	
12	CLV+	O	Output for disk motor control. 3 values can be output by a command.	
13	CLV-	O		
14	V/*P	O	Output terminal for automatic switching monitor between rough servo and phase control. (Rough servo on "H"position, phase servo on "L".	
15	HFL	I	Input terminal for track detection signals. Schmitt input.	
16	TEST2	I	Input terminal for tracking error signals. Schmitt input.	
17	TOFF	O	Output terminal for tracking-off.	
18	TGL	O	Output terminal for tracking gain switching. "L" position increases gain.	
19	JP+	O	Output for track jump control. 3 values can be output by a command.	
20	JP-	O		
21	PCK	O	Terminal for clock monitor for EFM data reproduction. 4.3218 MHz when phase locked.	
22	FSEQ	O	Output terminal for synchronizing signal detection. "H" position when the synchronizing signals detected in EFM signals match with the synchronizing signals generated internally.	
23	VDD	-	Power terminal for digital signals.	
24	CONT1	I/O	Generalized I/O terminal 1	Controlled by a serial data command from micro-computer. When not used, either use as input terminal and then ground or use as output terminal and then open circuit.
25	CONT2	I/O	Generalized I/O terminal 2	
26	CONT3	I/O	Generalized I/O terminal 3	
27	CONT4	I/O	Generalized I/O terminal 4	
28	CONT5	I/O	Generalized I/O terminal 5	
29	EMPH/ CONT6	O	Terminal for de-emphasis monitor. De-emphais disk is being reproduced while in the "H" position. Or generalized Output terminal 6.	
30	C2F	O	Output terminal for C2 flag.	
31	DOUT	O	Output terminal for digital OUT. (EIAJ format)	
32	TEST3	I	Input terminal for test. Pull-down resistor incorporated. Make sure to ground.	
33	TEST4	I	Input terminal for test. Pull-down resistor incorporated. Make sure to ground.	
34	PCCL	I	Generalized I/O terminal for command identification. Pull-down resistor incorporated. When used as the same function as LC78622E, open circuit or ground. ("H" position: enables only generalized I/O command to be controlled. "L" position: enables all the c	
35	MUTEL/C ONT7	O	L channel 1-bit DAC	Mute output terminal for L channel. Or generalized output terminal 7.
36	LVDD	-		Power terminal for L channel.
37	LCHO	O		Output terminal for L channel.
38	LVSS	-		Ground terminal for L channel. Make sure to ground.
39	RVSS	-	R channel 1-bit DAC	Ground terminal for R channel. Make sure to ground.
40	RCHO	O		Output terminal for R channel.
41	RVDD	-		Power terminal for R channel.
42	MUTER/C ONT8	O		Mute output terminal for R channel. Or generalized output terminal 8.

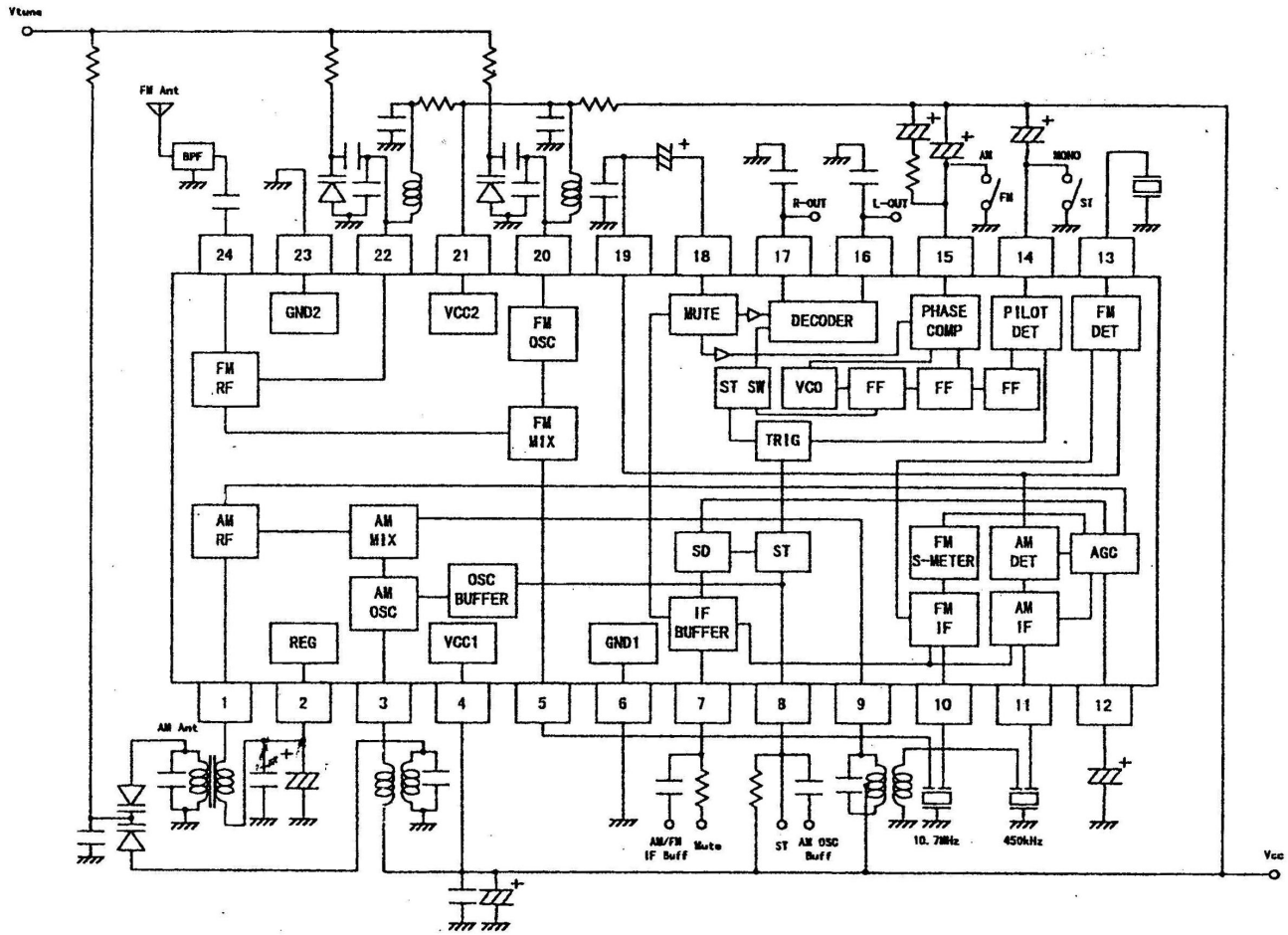
IC BLOCK DIAGRAM & DESCRIPTION

IC602 LC78622 (Digital Signal Processor)

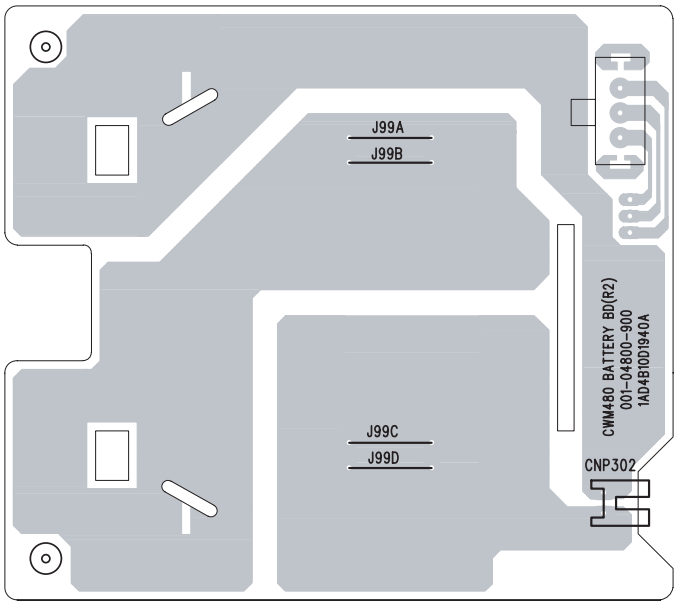
Terminal No.	Terminal symbols	I/O	DESCRIPTION
43	XVDD	-	Power terminal for crystal oscillator
44	XOUT	O	Joining terminal for crystal resonator (16.9344 MHz)
45	XIN	I	
46	XVSS	-	Ground terminal for crystal oscillator. Make sure to ground.
47	SBSY	O	Output terminal for synchronizing signals of sub-code clock.
48	EFLG	O	Monitor terminal for 1 bit or 2 bit error correction
49	PW	O	Output terminal for sub-code P, Q, R, S, T, U or W.
50	SFSY	O	Output terminal for synchronizing signals of sub-code frame. When sub-code is stood by, falls.
51	SBCK	I	Input terminal for clock to read out sub-code. Schmitt input (when not used, make sure to ground.)
52	FSX	O	Output terminal for synchronizing signal (7.35 kHz) which is divided from crystal oscillator.
53	WRQ	O	Output terminal for Q output standby of sub-code.
54	RWC	I	Input terminal for read/write control. Schmitt input.
55	SQOUT	O	Output terminal for Q output of sub-code.
56	COIN	I	Input terminal for command from micro-computer.
57	*CQCK	I	Input terminal either for clock to take in command input or for clock to take out sub-code from SQOUT. Schmitt input.
58	*RES	I	Input terminal for reseting this LSI. Switches to "L" position for a moment at power-on.
59	TST11	O	Output terminal for test. Make sure to open circuit. (Normally "L" output)
60	16M	O	Output terminal of 16.9344 MHz
61	4.2M	O	Output terminal of 4.2336 MHz
62	TEST5	I	Input terminal for test. Pull-down resistor incorporated. Make sure to ground.
63	*CS	I	Input terminal for chip selecting. Pull-down resistor incorporated. Make sure to ground when not controlled.
64	TEST1	I	Input terminal for test. No pull-down resistor. Make sure to ground.

Note: Each power terminal (VDD, VVDD, LVDD, RVDD and XVDD) must be supplyed with the same voltage.

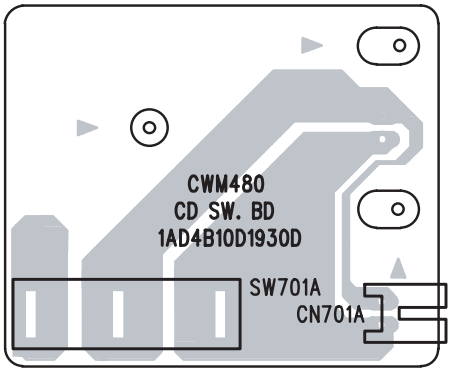
IC801 LA1823 (Tuner)



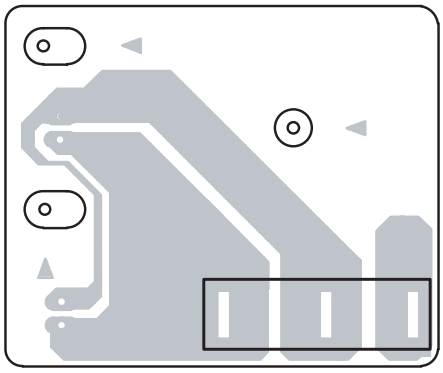
WIRING DIAGRAM (BATTERY,CD SW,CASS)



BATTERY

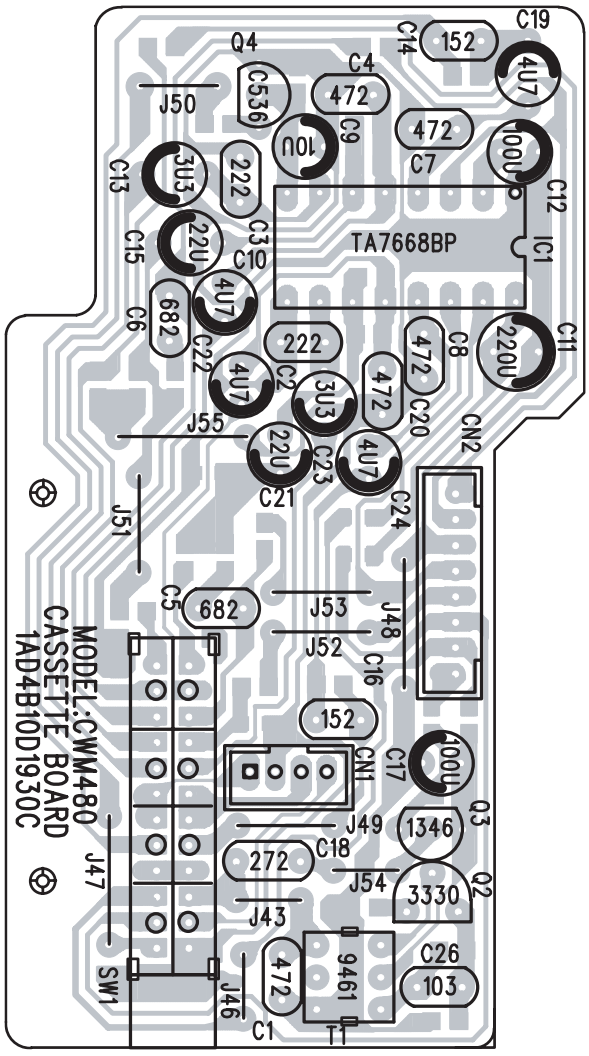


A SIDE



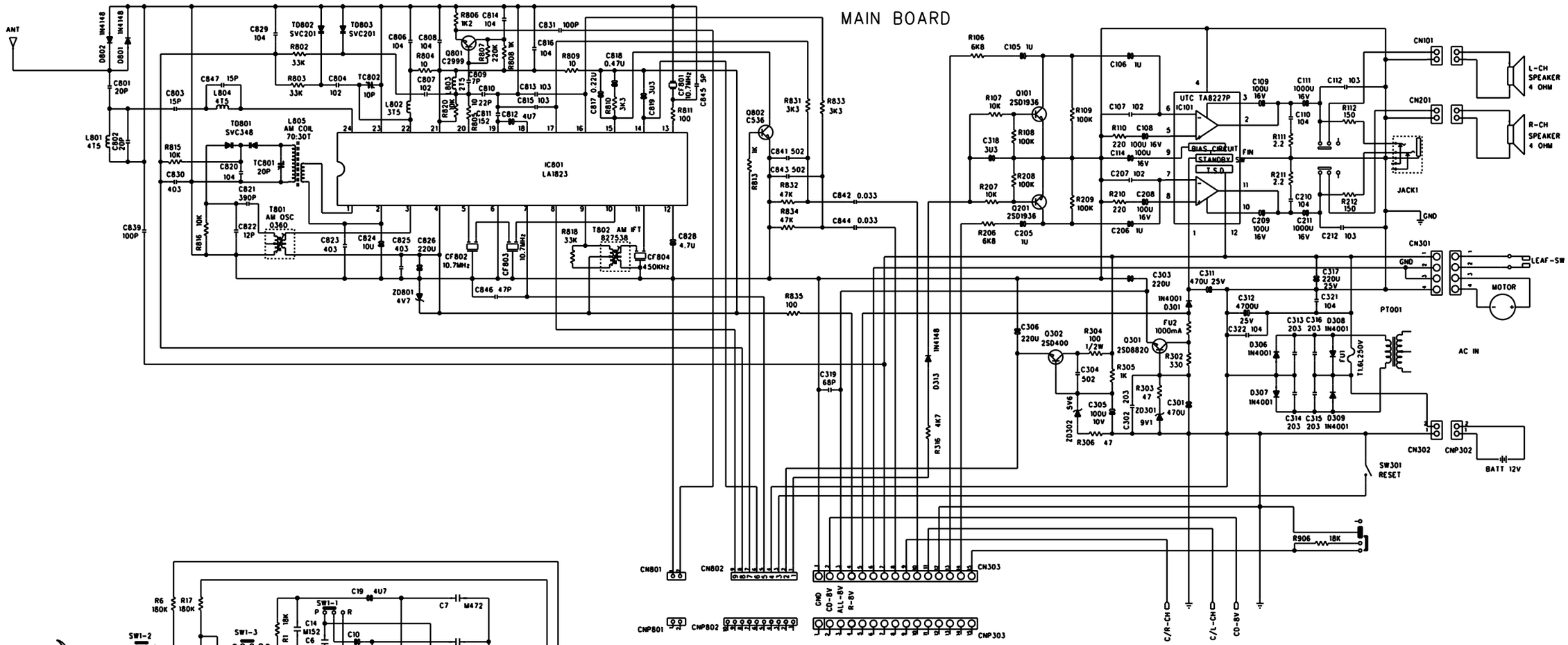
B SIDE

CD SW

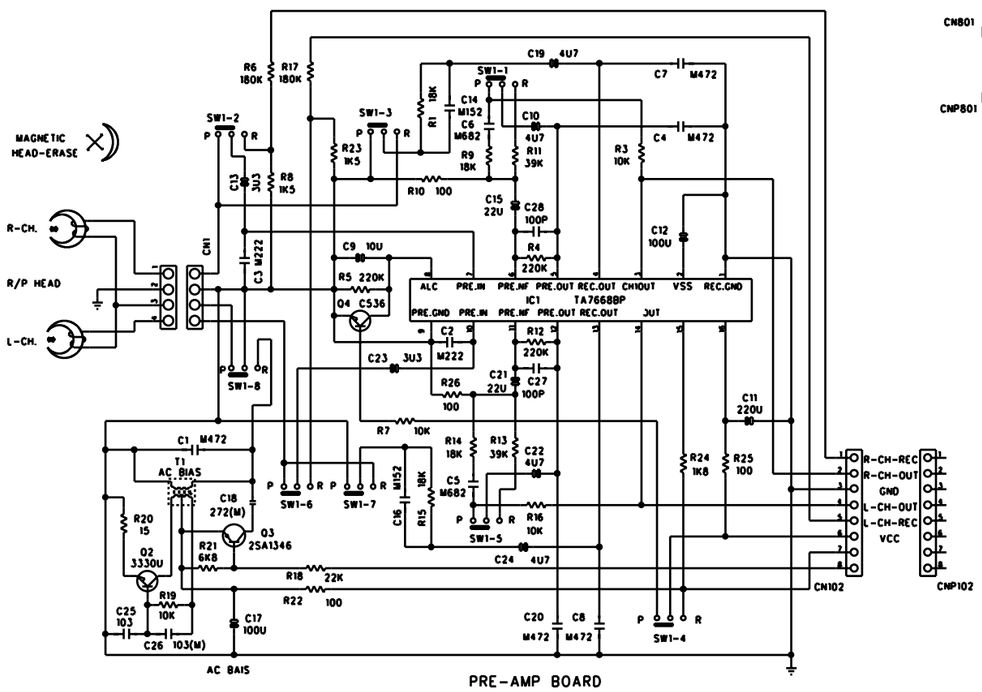


CASS

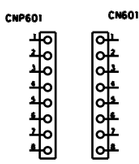
MAIN BOARD

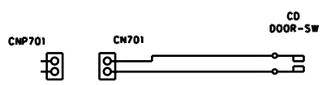


PRE-AMP BOARD

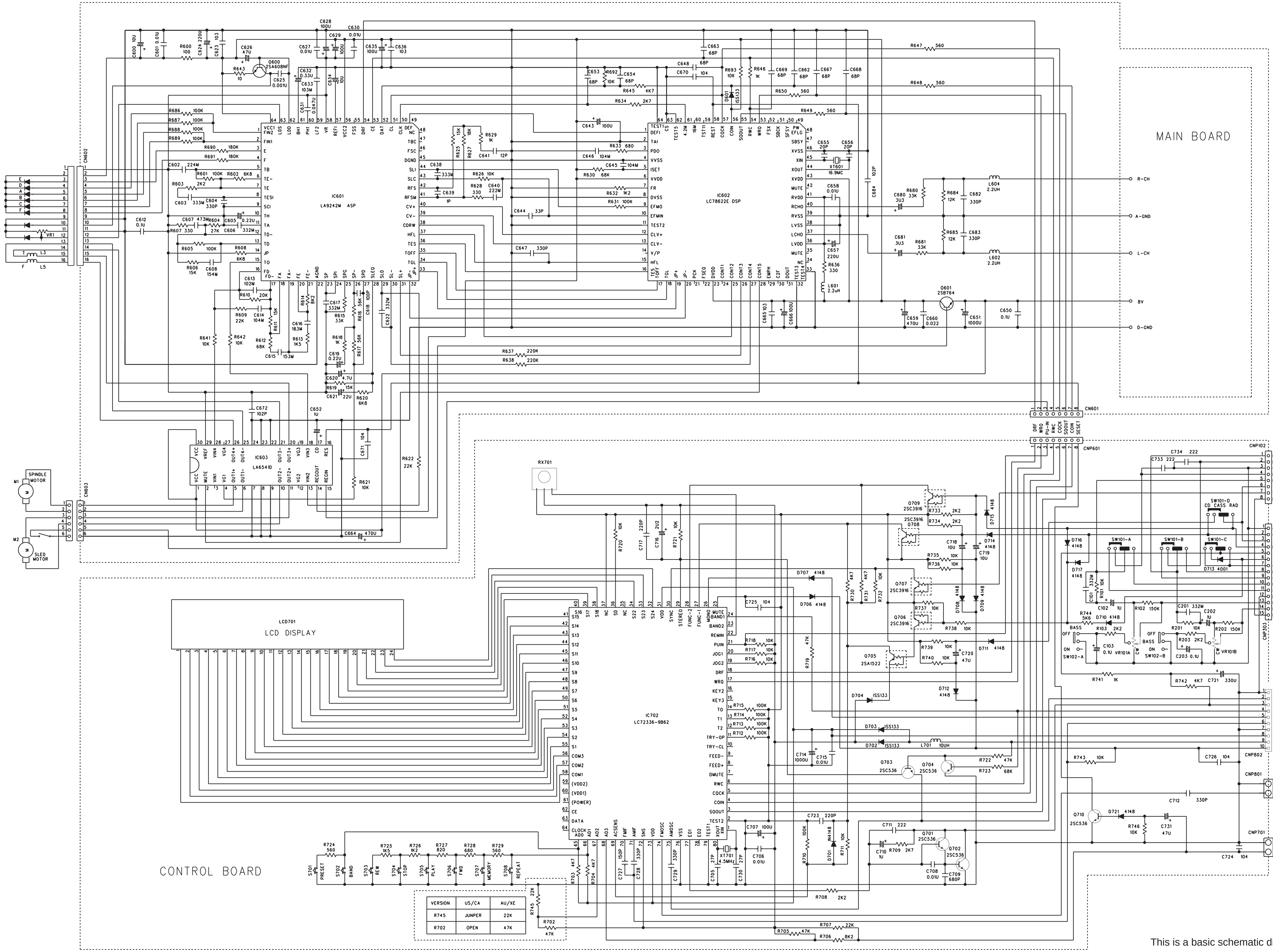


MICON/LCD KET BOARD



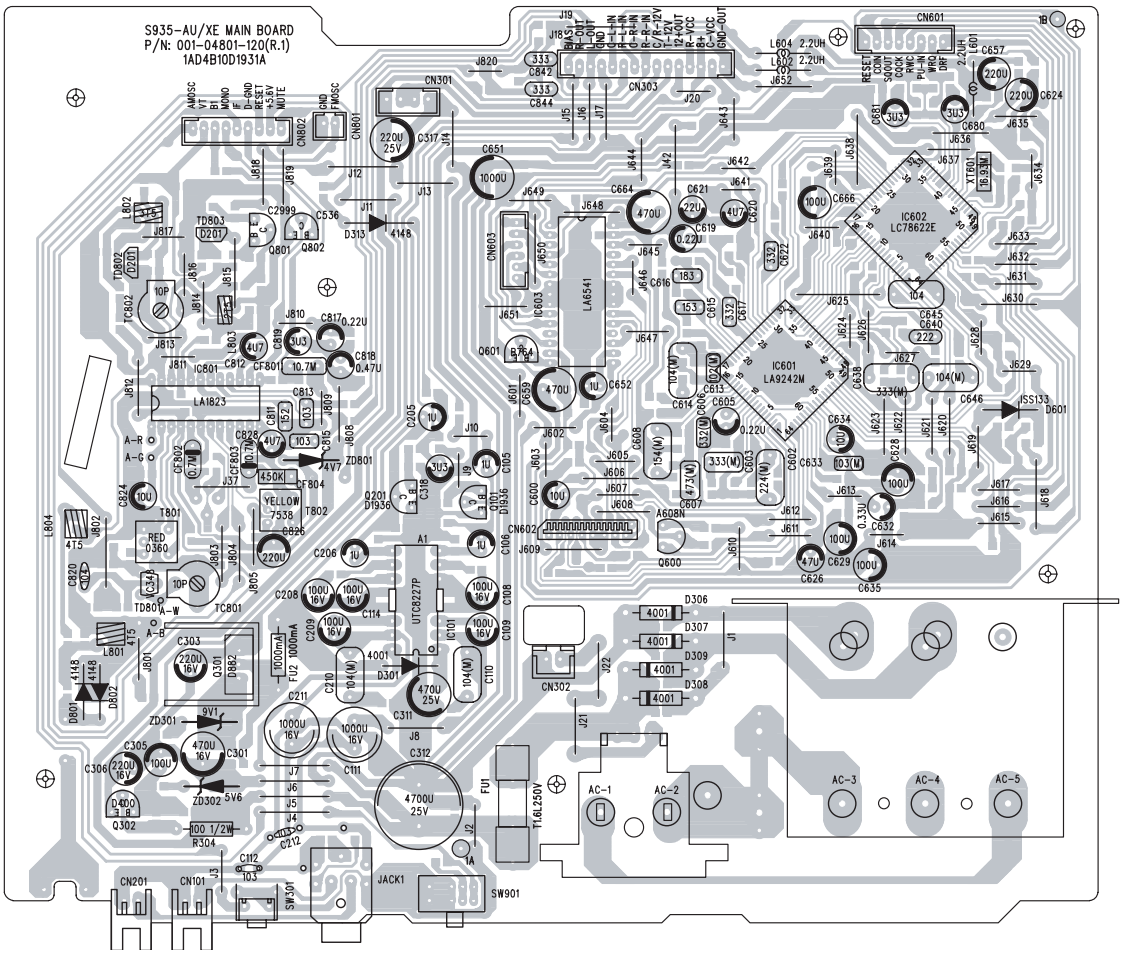


Parts marked with this sign are safety critical cpmponents. They must always be replaced with identical components refer to the appropriate parts list and ensure exact replacement.

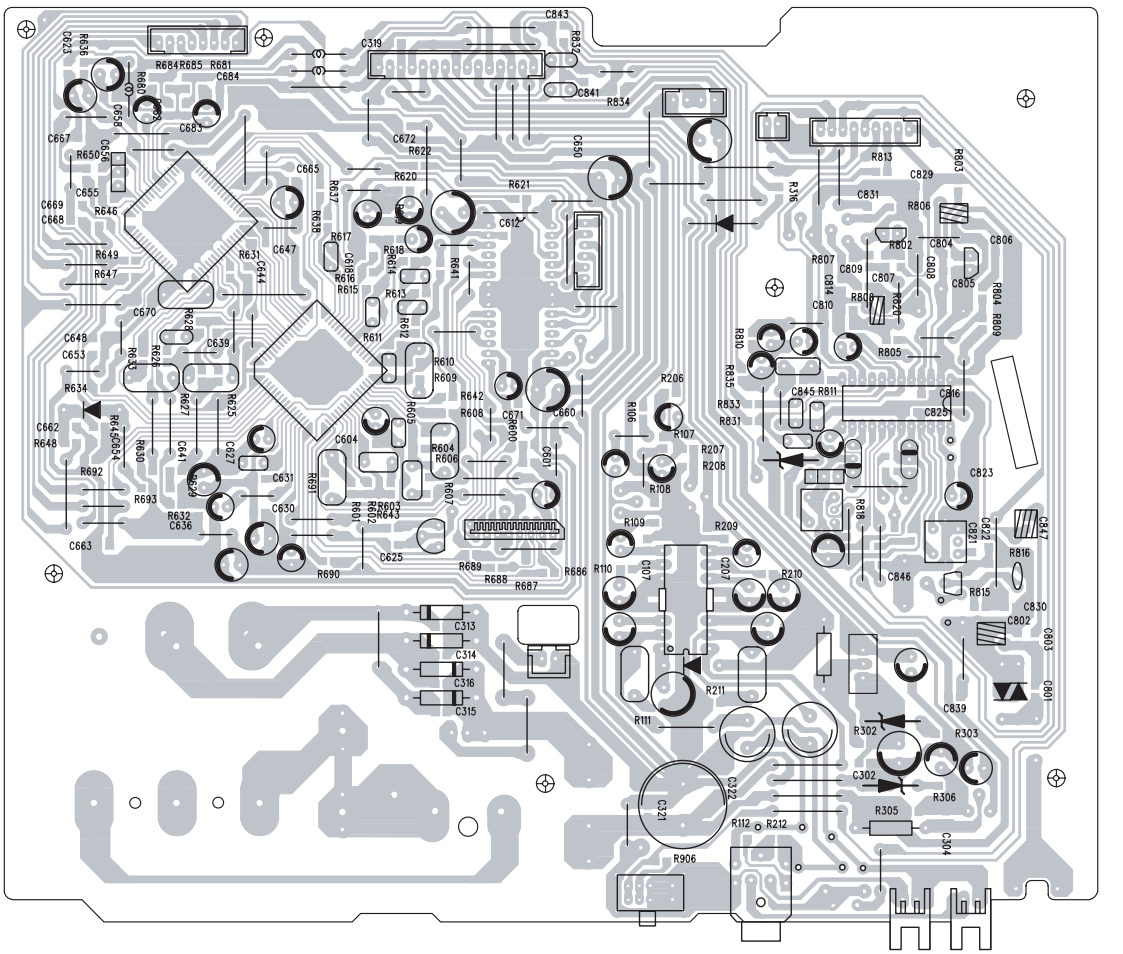

MAIN BOARD
CONTROL BOARD
IC601
LA9242M ASP
IC602
LC78622E DSP
IC603
LA6541D
IC702
LC72336-9B62
LCD701
LCD DISPLAY
RX701
CN602
CN603
CN601
CNP601
CNP102
CNP303
CNP802
CNP801
CNP701
SPINDLE MOTOR
SLED MOTOR
Q600 2SA608NF
Q601 2SB764
XT601 16.9MC
XT701 4.5MHz
R-CH
A-GND
L-CH
8V
D-GND
DRF
WRQ
PU-IN
RWC
COCK
SQOUT
COIN
SESET
R-REC
R-OUT
GND
L-OUT
L-REC
VCC
SYNC
B.CUT
CD-8V
ALL-8V
R.-8V
ALL-12V
T-12V
C/R 12V
R/R IN
C/R IN
R/L IN
C/L IN
D-GND
AM-OSC
VT
B1
MONO
IF
RESET
+5.6V
MUTE
FM-OSC
LID SW.
SW101-D CD CASS RAD
SW101-A
SW101-B
SW101-C
SW102-A
SW102-B
VR101A
VR101B
BASS
S701 PRESET
S702 BAND
S703 REW
S704 STOP
S705 PLAY
S706 FWD
S707 MEMORY
S708 REPEAT
VERSION | US/CA | AU/XE
R745 | JUNPER | 22K
R702 | OPEN | 47K

This is a basic schematic diagram.

WIRING DIAGRAM (CD MAIN)

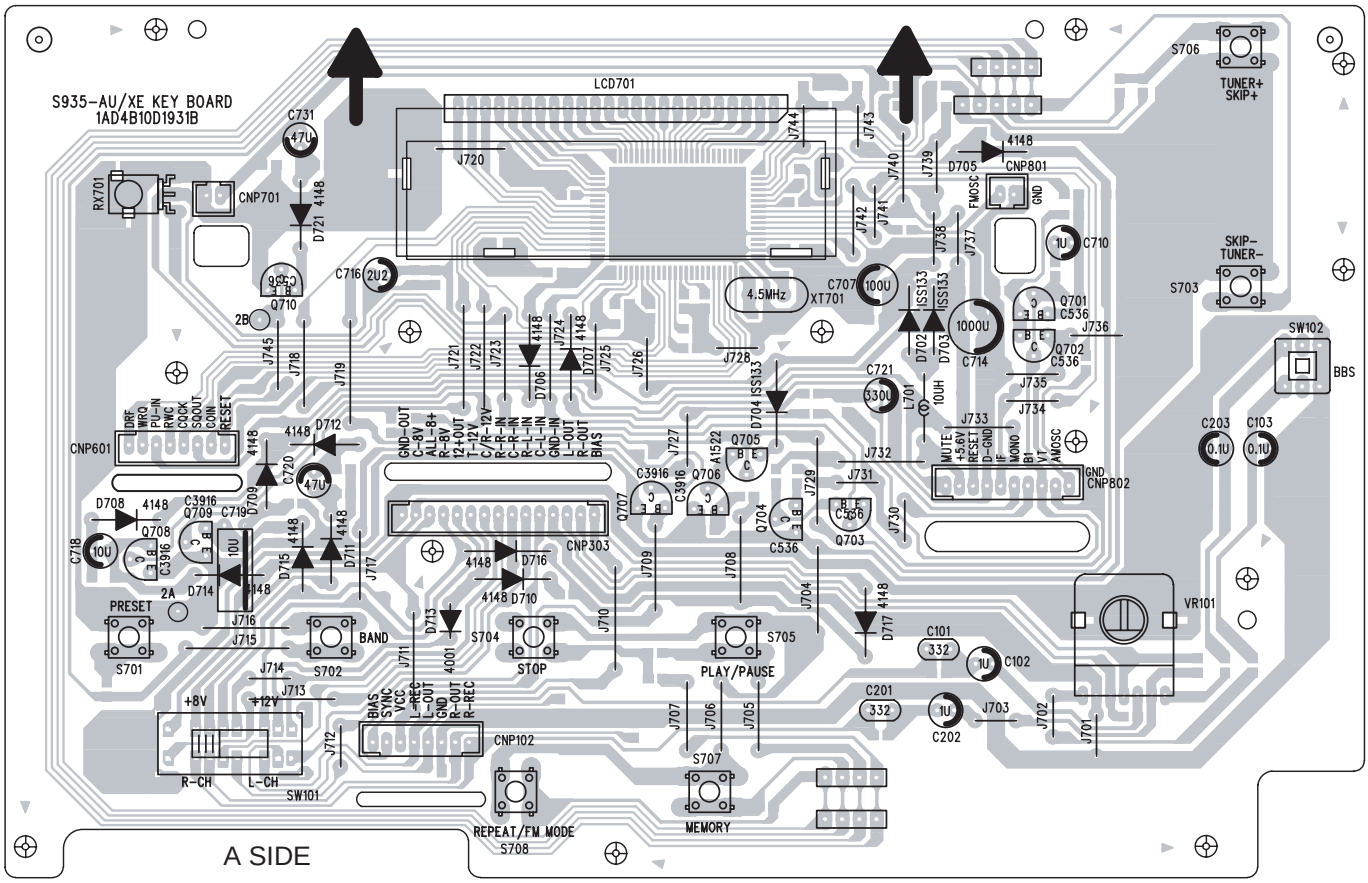


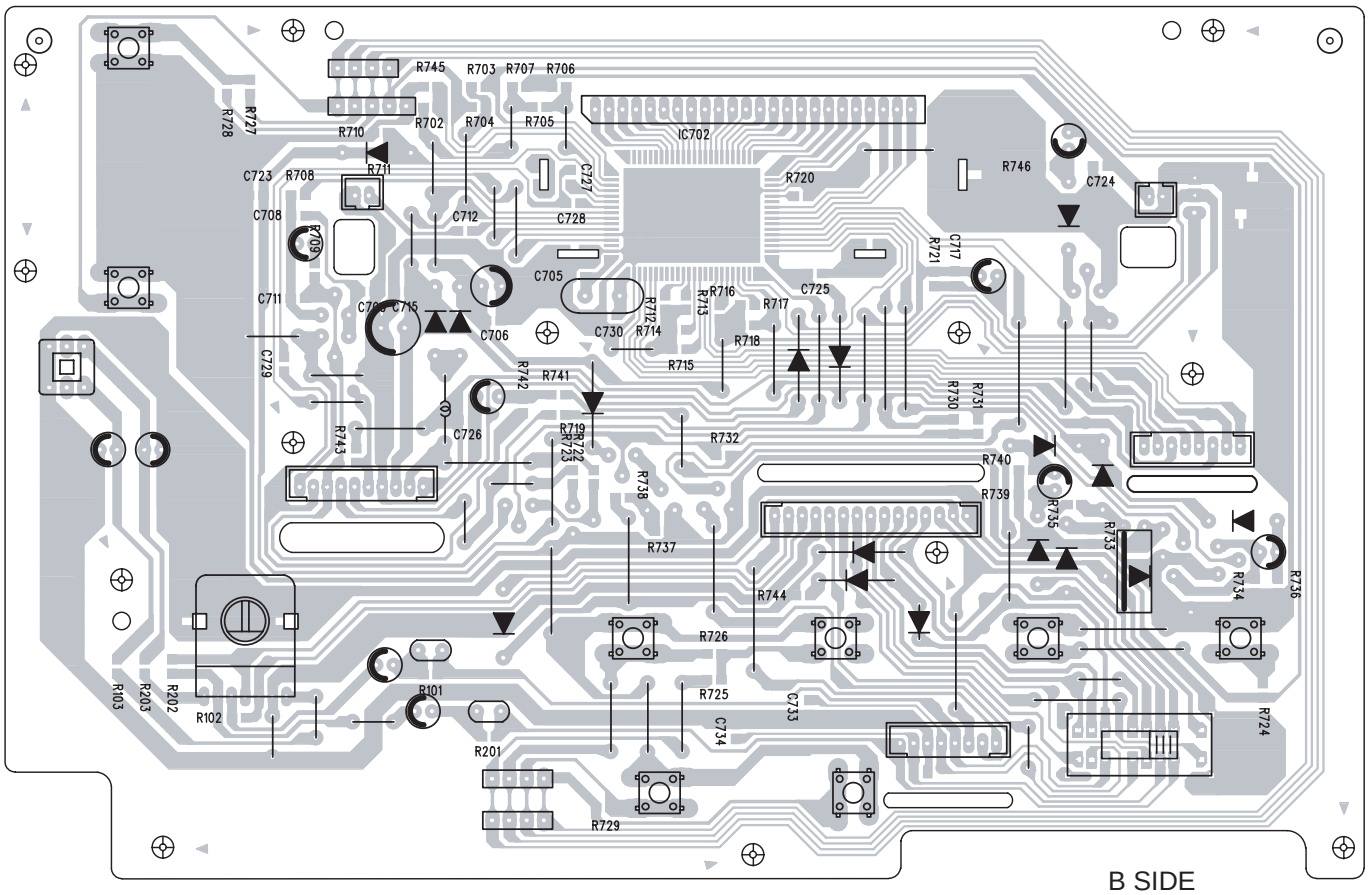
A SIDE



B SIDE

WIRING DIAGRAM (DISPLAY)





SANYO Electric Co., Ltd.
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